San José Police & Fire Department Retirement Plan

Classic Values, Innovative Advice

Demographic Experience Study
Adoption of Economic Assumptions

November 6, 2025

Bill Hallmark, ASA, EA, MAAA, FCA
Anne Harper, FSA, EA, MAAA

Agenda

Historical Gains and Losses

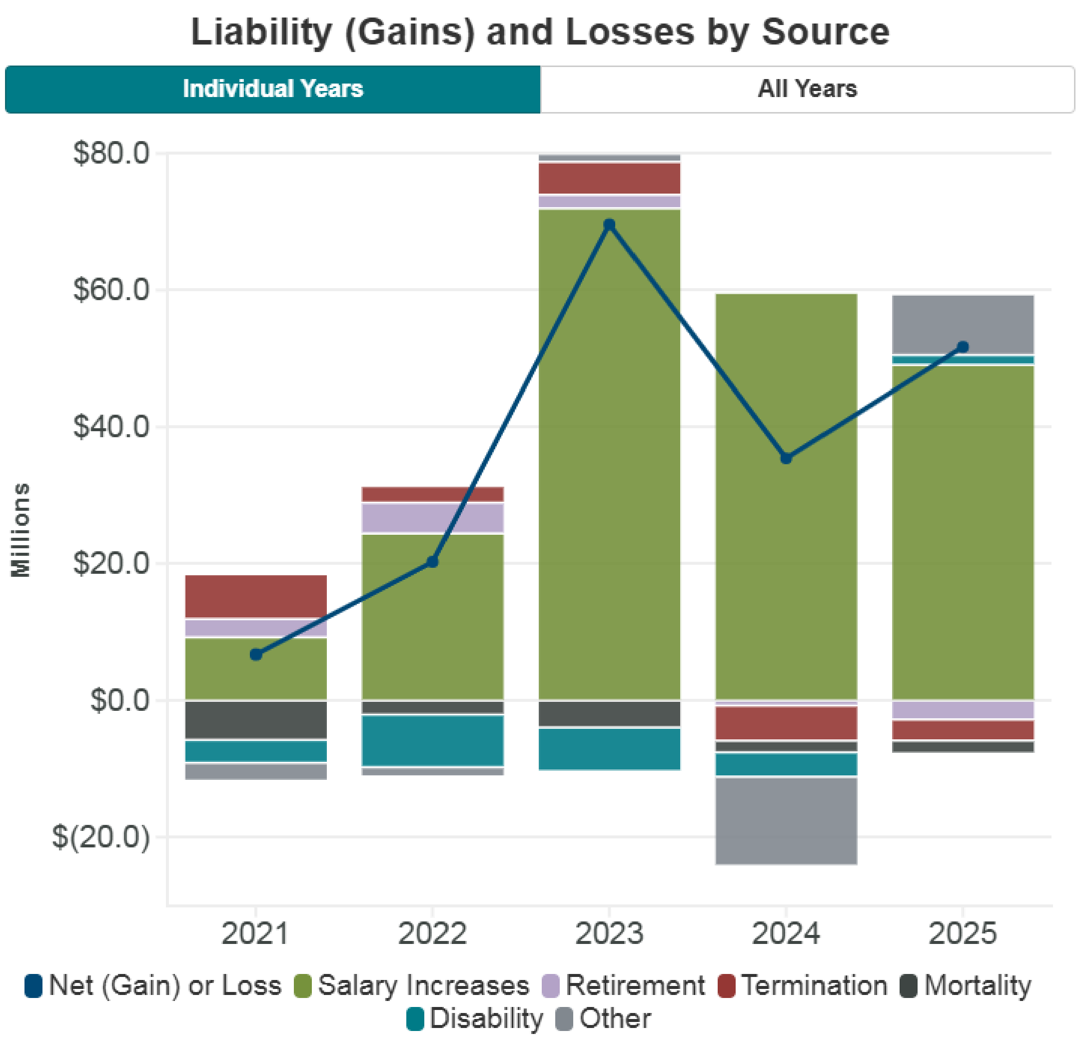
Analysis of Demographic Assumptions

Board Decisions

Background

- October meeting
  - – Reviewed economic assumptions
  - – Consider an increase to the wage inflation assumption
    - 3.00%
    - 3.125%
    - 3.25%
  - – No other changes
- Deferred decision until additional information is available
  - – Preliminary valuation results
  - – Demographic assumption changes

Historical Gains and Losses



- Demographic assumptions were last updated in 2023
- Actuarial Liability is about $6.4 billion
  - 2025 loss is about 0.8% of the expected Actuarial Liability
- The primary source of loss is salary increases
  - Expect future salary increases to be lower than the recent past, but some adjustment to the assumptions is appropriate
- Other notes
  - Mortality has provided consistent gains
  - Retirement and termination assumptions produced gains since they were updated in 2023
  - Disability gains and losses by year may be misleading due to the lag in processing disability claims

Demographic Experience Study

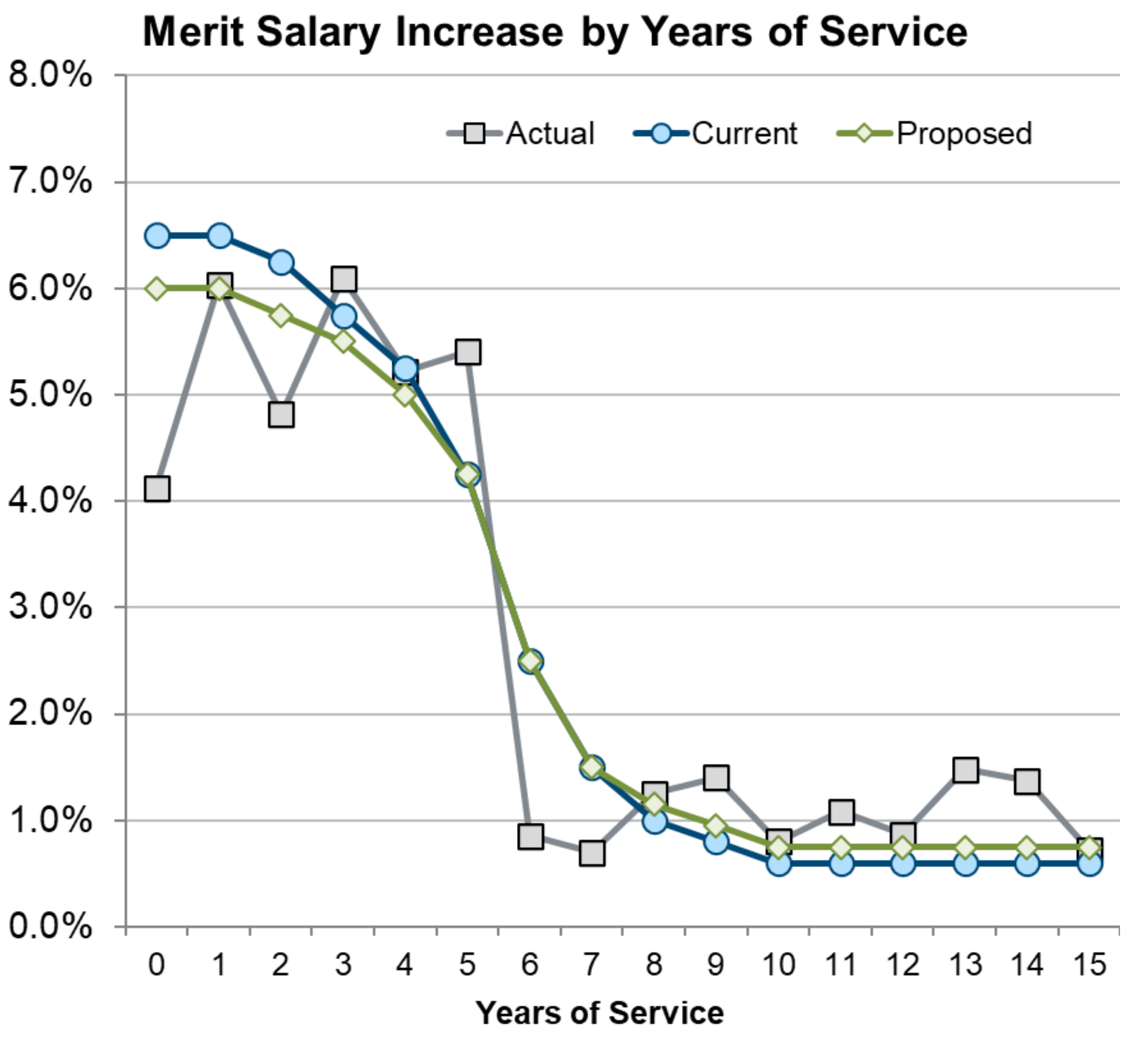
Demographic Assumption Summary

Assumption	Proposed Changes
Merit Salary Scale	• Slightly lower increases for the first 5 years of service • Slightly higher increases after 8 years of service • Special adjustments to reflect the POA agreement on longevity and crisis training pay
Retirement	• Reductions in most retirement rates for Police and Fire
Termination	• Reduction in termination rates for Fire members for 0-3 years of service

Mortality	• Change base tables from Pub-2010 tables to Pub-2016
	    • Lower mortality rates at younger ages
	    • Higher mortality rates at older ages

Disability	• Higher disability incidence rates, particular for age 50+ • Separate rates for Police and Fire
Percentage Married	• Reduce female percentage married at retirement from 85% to 70%
Administrative Expenses	No changes
Other Assumptions	No changes

Merit Salary Scale

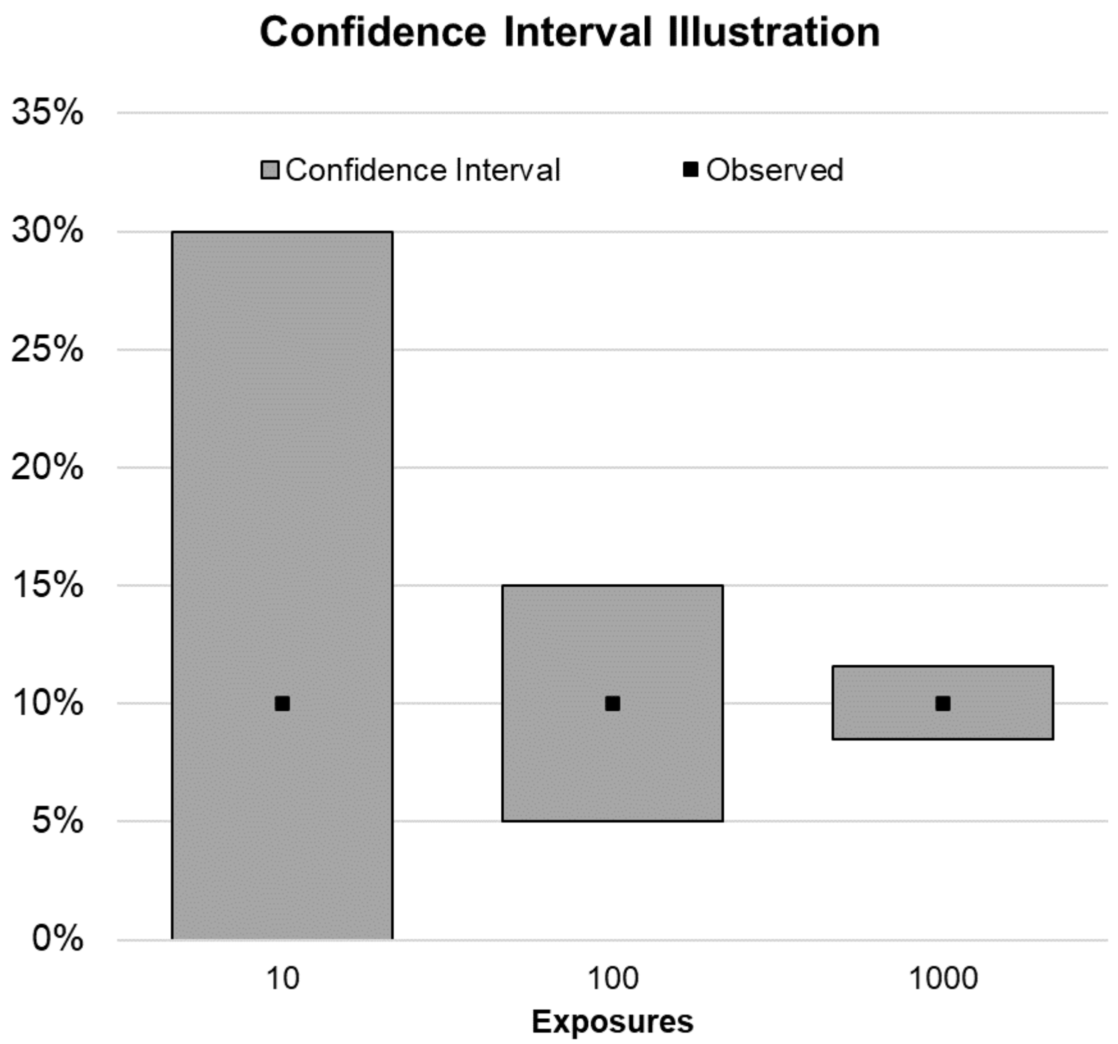


- Merit salary increases are primarily due to steps and promotions
  - Does not include across-the-board increases
- Proposed changes based on experience:
  - Lower rates for 0-4 years of service
  - Higher rates for 8+ years of service
- Proposed changes due to POA agreement
  - July 1, 2027: 3.75% increase for any Police member with 20+ years of service
    - (Crisis training pay becomes pensionable)
  - July 1, 2028: 1.25% increase for any Police member with 20+ years of service
    - (Portion of longevity pay becomes pensionable)
  - 20 years of service: 5.0% (3.75% + 1.25%) increase for any Police member attaining 20 years of service after the effective dates above

(We understand that changes to the San José Municipal Code will be required to implement these changes to pensionable pay. We assume any needed changes will be made before the crisis training or longevity pay becomes pensionable.)

Confidence Intervals and Other Metrics

- Amount of data critical in determining how much credibility to assign to the experience:
  - Observed Rate = 10%
  - 1 retirement with 10 exposures, “true” rate between 0% – 30%
  - 10 retirements with 100 exposures, “true” rate between 5% – 15%
  - 100 retirements with 1000 exposures, “true” rate between 8% – 12%
- **Generally**, propose changes if current assumption is outside confidence interval
  - Adjust for future expectations that differ from historical experience



Confidence Intervals and Other Metrics

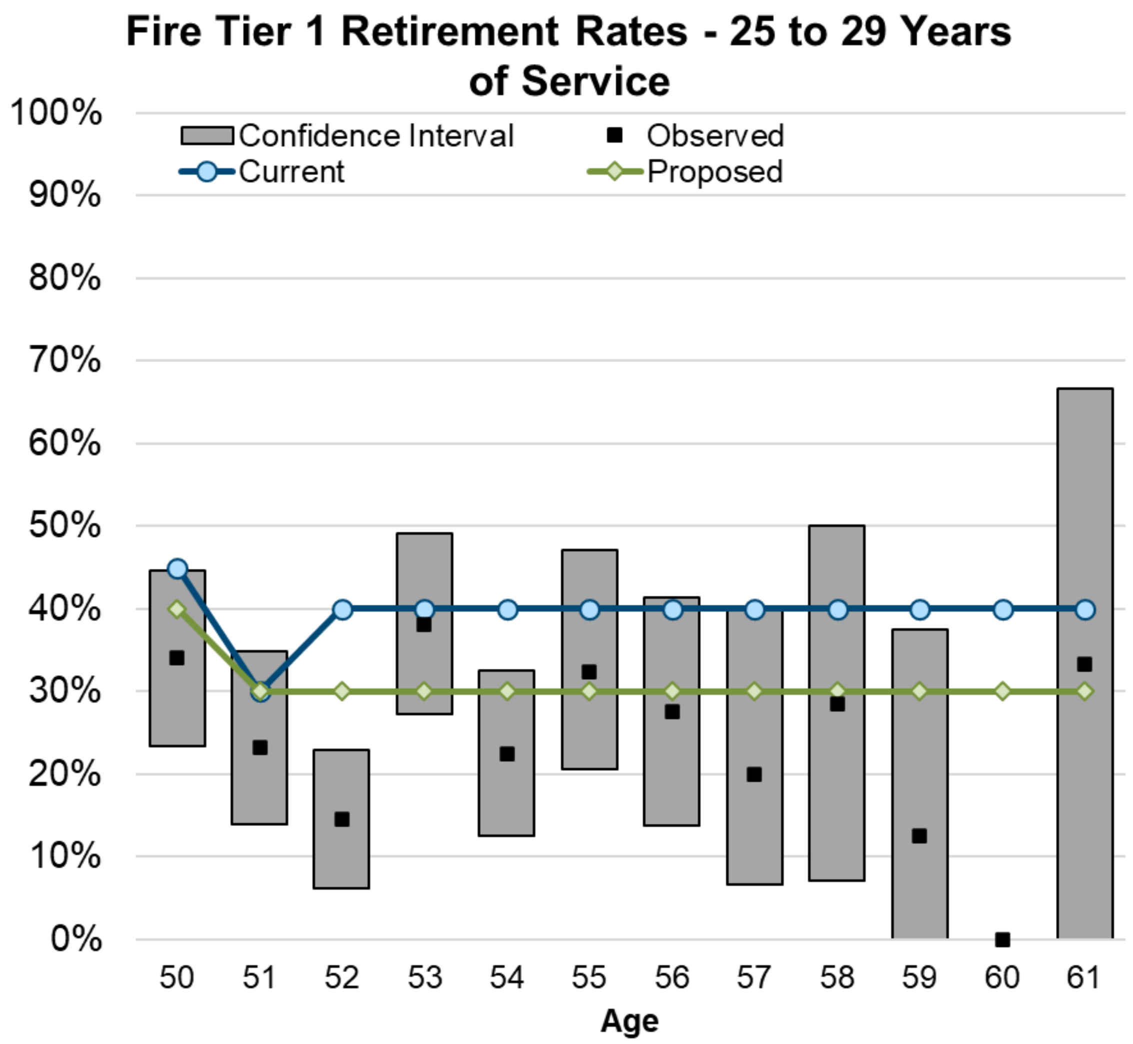
- **Generally**, 10 years of data (2016 to 2025) used to analyze each assumption
- Additional consideration given to experience during the pandemic if materially different
- Actual-to-expected ratios are used to set the level of the assumption
  - The ideal ratio is 100%
  - Proposed changes generally move closer to 100%
- R-squared statistics are used to assess the pattern of the assumption
  - An ideal statistic is 100%
  - Proposed changes generally move closer to 100%

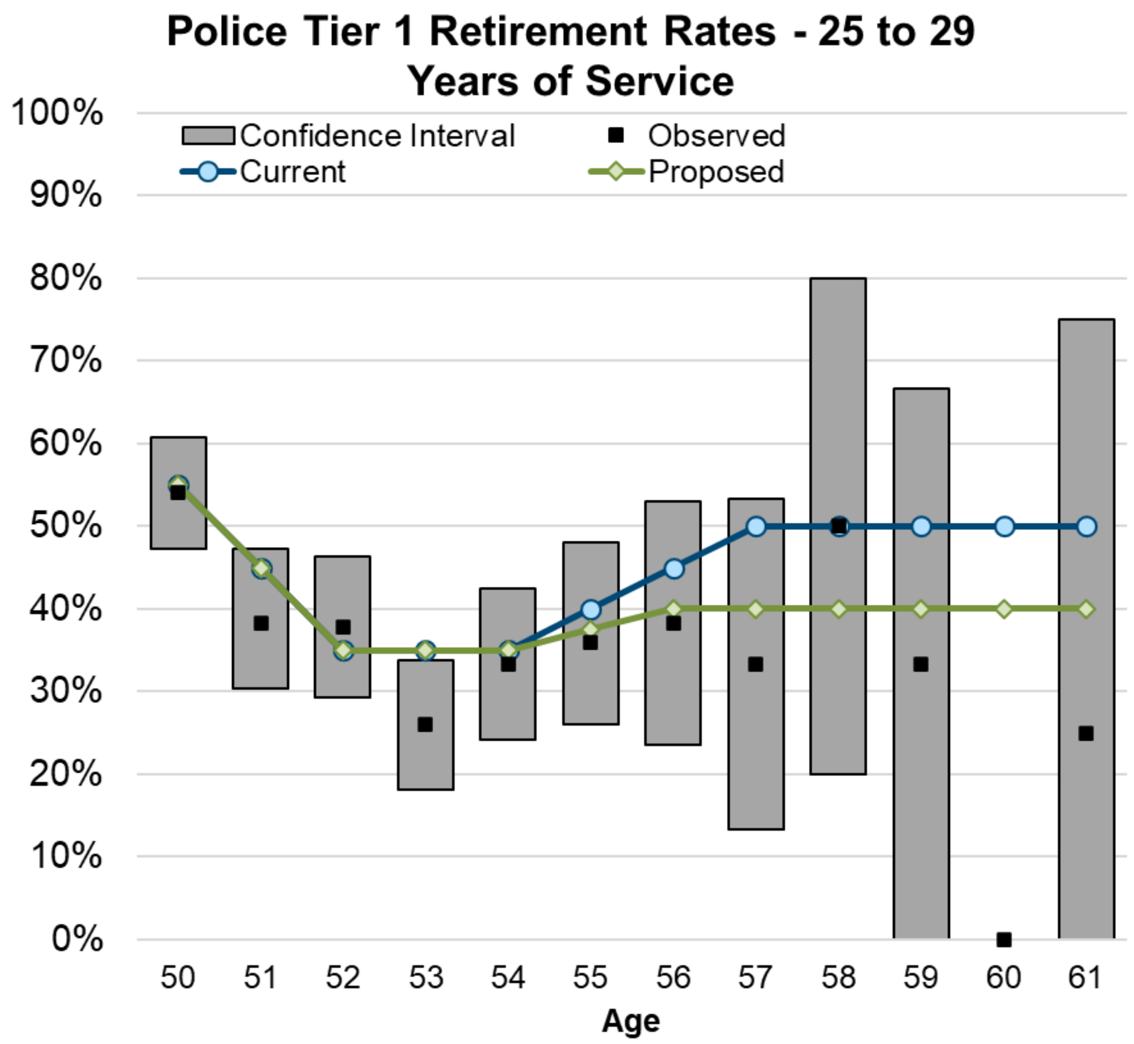
Retirement Rates

- No Tier 2 retirement data, so analysis only on Tier 1
- Very few members are age 62 or older
  - Continue to assume 100% retirement at age 62
- Changes noted in this Analysis
  - Continuing to use a 10-year period caused a year with very high retirement rates to drop out
  - The two most recent years added to the analysis had lower retirement rates
  - Tier 2 retirement rates for 30+ years of service adjusted to be no greater than Tier 1 retirement rates

Service	20 – 24	25 – 29	30 +
Fire			
A/E Ratios			
Current	86%	67%	48%
Proposed	92%	85%	89%
R-Squared			
Current	94%	81%	65%
Proposed	95%	81%	68%
Police			
A/E Ratios			
Current	58%	90%	80%
Proposed	78%	93%	87%
R-Squared			
Current	90%	99%	54%
Proposed	92%	99%	54%

Tier 1 Retirement Rates: 25 – 29 Years of Service



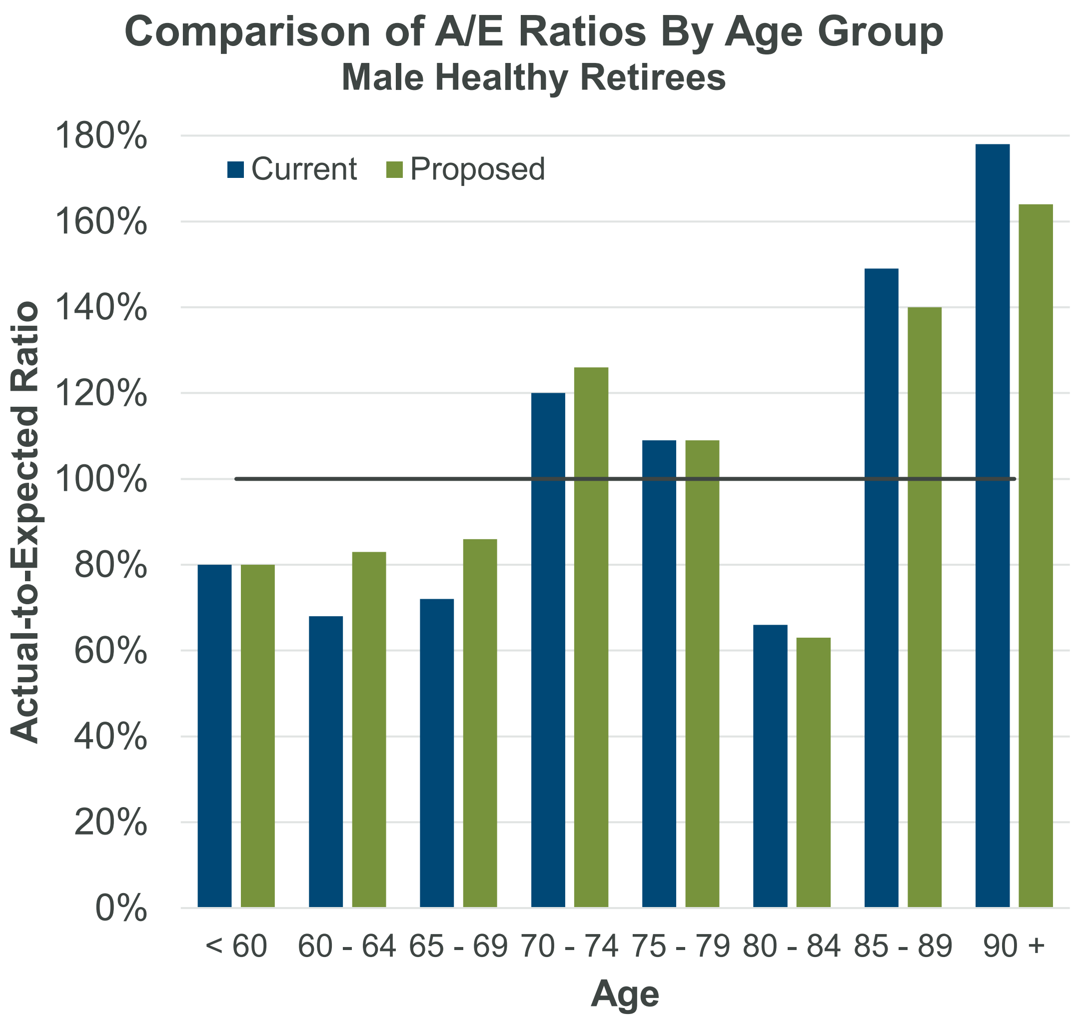


Termination Rates

- Fire
  - Lower termination experience, although most rates are within the confidence interval
  - Propose reduced termination rates for 0 to 3 years of service
- Police
  - Experience remains consistent with current assumptions
  - No changes proposed

Fire	
A/E Ratios	
Current	80%
Proposed	94%
R-Squared	
Current	88%
Proposed	86%
Police	
A/E Ratios	
Current	94%
Proposed	94%
R-Squared	
Current	93%
Proposed	93%

Mortality



Group	Sex	Deaths	Current A/E	Proposed A/E
Healthy Retirees	M	169	95%	99%
	F	4	38%	39%
Disabled Retirees	M	342	91%	92%
	F	8	102%	91%
Beneficiaries	M	3	167%	152%
	F	158	127%	115%
Non-Annuitants	M	12	66%	68%
	F	1	102%	92%

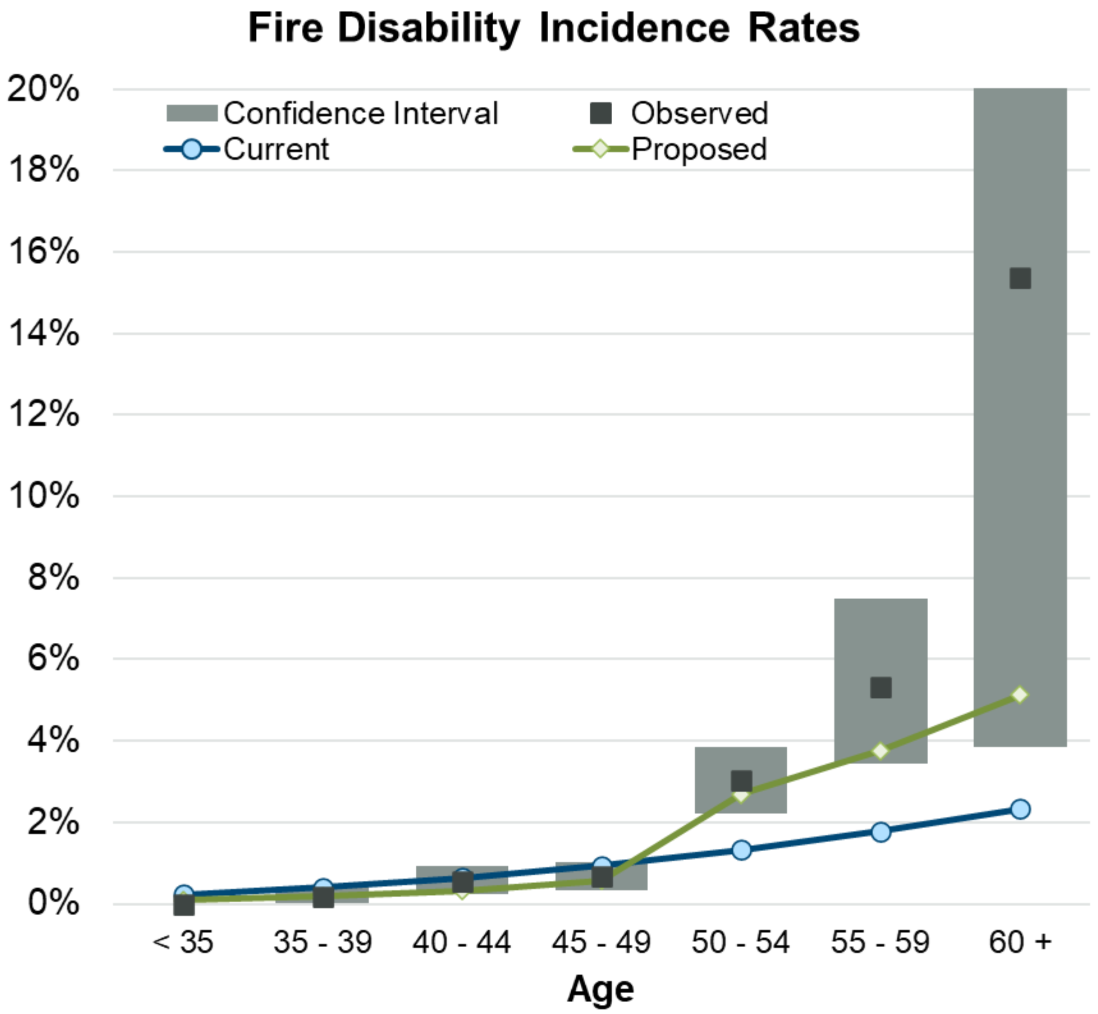
- In aggregate, the A/E ratio improvement is minimal
- Using Pub-2016 produces better A/E ratios by age group
  - Higher A/E ratios (lower mortality) at younger ages
  - Lower A/E ratios (higher mortality) at older ages

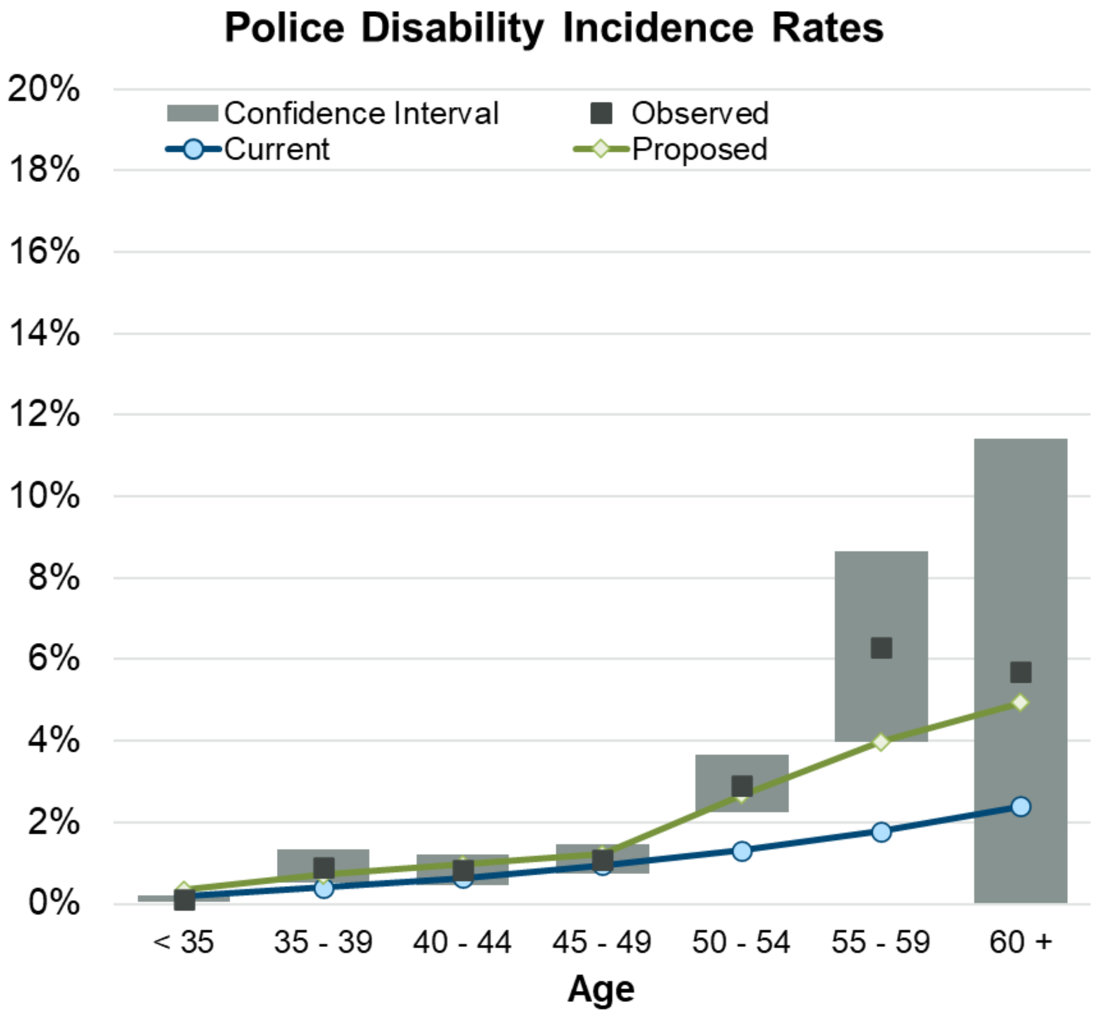
Disability Incidence

- Prior study had much lower disability rates
  - Many new disabilities have been approved within the last two years
  - Substantially increased the disability rates for the years included in the prior study, particularly for ages 50+
  - Used 10 years of data (2015-2024)
  - Excluded 2025 from the current study due to extremely low disability rates, likely due to the lag in processing disability claims
- Used 2021 CalPERS Public Agency disability rates as a baseline and adjusted for San Jose's experience
  - Combined ordinary and industrial disability rates
  - Separate tables for Police and Fire
    - 110% of the Firefighter table
    - 77% of the Police table

Fire		
A/E Ratios		
	Current	149%
	Proposed	124%
R-Squared		
	Current	48%
	Proposed	99%
Police		
A/E Ratios		
	Current	170%
	Proposed	100%
R-Squared		
	Current	53%
	Proposed	89%

Disability Incidence Rates





Estimated Cost Impacts

	Actuarial Liability	Member Rate Tier 1	Member Rate Tier 2	City Contribution Rate	City Contribution Amount
Preliminary Results	$ 6,376.2	11.2%	14.0%	73.4%	$ 228.7
Impact of Assumption Changes					
Retirement and Termination	(30.1)	(0.1%)	(0.4%)	(0.9%)	(2.7)
Mortality	(61.0)	(0.0%)	(0.0%)	(1.6%)	(4.9)
Disability & Other	7.3	0.1%	0.4%	0.6%	1.7
Merit Salary Scale	38.3	0.3%	0.4%	1.3%	4.1
Total Demographic Assumption Changes	**(45.5)**	**0.3%**	**0.4%**	**(0.5%)**	**(1.8)**
Results with 3.00% Wage Inflation	$ 6,330.7	11.5%	14.4%	72.9%	$ 226.9
Results with 3.125% Wage Inflation	$ 6,338.2	11.7%	14.6%	73.2%	$ 228.4
Results with 3.25% Wage Inflation	$ 6,342.9	11.8%	14.8%	73.5%	$ 229.5

Amounts in Millions

Board Decisions: Adopt Proposed Demographic Changes

Assumption	Proposed Demographic Assumption Changes
Merit Salary Scale	• Slightly lower increases for the first 5 years of service • Slightly higher increases after 8 years of service • Special adjustments to reflect the POA agreement on longevity and crisis training pay
Retirement	• Reductions in most retirement rates for Police and Fire
Termination	• Reduction in termination rates for Fire members for 0-3 years of service

Mortality	• Change base tables from Pub-2010 tables to Pub-2016
	    • Lower mortality rates at younger ages
	    • Higher mortality rates at older ages

Disability	• Higher disability incidence rates, particular for age 50+ • Separate rates for Police and Fire
Percentage Married	• Reduce female percentage married at retirement from 85% to 70%
Administrative Expenses	No changes
Other Assumptions	No changes

Board Decisions: Adopt Economic Assumptions

Assumption	Current	Proposed	Alternative
Price Inflation	2.50%	2.50%	
Wage Inflation			
Select	Current bargaining agreements	Current bargaining agreements	
Ultimate	3.00%	3.25%	3.125%
Amortization Payment Increases	2.50%	2.50%	
Discount Rate	6.625%	6.625%	

Certification

- The purpose of this presentation is to review the demographic assumptions for the City of San José Police and Fire Department Retirement Plan.
- In preparing our presentation, we relied on information (some oral and some written) supplied by the Plan. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.
- This presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.
- This presentation was prepared exclusively for the City of San José Police and Fire Department Retirement Plan for the purpose described herein. Other users of this presentation are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

William R. Hallmark, ASA, EA, MAAA, FCA
Consulting Actuary

Anne. D. Harper, FSA, EA, MAAA
Principal Consulting Actuary

Appendix – 3.00% Wage Inflation Preliminary Detail

Contribution Rates and Amounts (Throughout the Year)						
	Fire		Police		Total	
	FYE 2026	FYE 2027	FYE 2026	FYE 2027	FYE 2026	FYE 2027
Member Rates						
Tier 1	12.0%	11.7%	10.4%	11.3%	11.2%	11.5%
Tier 2	15.0%	14.3%	13.6%	14.4%	14.0%	14.4%
Aggregate	13.3%	12.9%	12.4%	13.4%	12.7%	13.2%
City Contributions						
Tier 1 Admin/UAL	$ 13,703	$ 3,739	$ 147,652	$ 156,297	$ 161,355	$ 160,036
Tier 1 Normal Cost	$ 20,779 32.2%	$ 20,444 31.5%	$ 19,408 28.7%	$ 20,409 31.1%	$ 40,187 30.4%	$ 40,853 31.3%
Tier 2 Contribution	$ 7,104 15.0%	$ 7,660 14.3%	$ 15,503 13.6%	$ 18,393 14.4%	$ 22,607 14.0%	$ 26,053 14.4%
Aggregate	$ 41,587 37.2%	$ 31,843 26.9%	$ 182,562 100.3%	$ 195,100 101.0%	$ 224,149 76.3%	$ 226,943 72.9%

Numbers may not add due to rounding

Dollar amounts in thousands

Appendix – 3.125% Wage Inflation Preliminary Detail

Contribution Rates and Amounts (Throughout the Year)	Fire		Police		Total	
	FYE 2026	FYE 2027	FYE 2026	FYE 2027	FYE 2026	FYE 2027
Member Rates						
Tier 1	12.0%	11.9%	10.4%	11.5%	11.2%	11.7%
Tier 2	15.0%	14.6%	13.6%	14.7%	14.0%	14.6%
Aggregate	13.3%	13.1%	12.4%	13.6%	12.7%	13.4%
City Contributions						
Tier 1 Admin/UAL	$ 13,703	$ 3,748	$ 147,652	$ 156,662	$ 161,355	$ 160,410
Tier 1 Normal Cost	$ 20,779 32.2%	$ 20,745 31.9%	$ 19,408 28.7%	$ 20,714 31.5%	$ 40,187 30.4%	$ 41,459 31.7%
Tier 2 Contribution	$ 7,104 15.0%	$ 7,798 14.6%	$ 15,503 13.6%	$ 18,720 14.7%	$ 22,607 14.0%	$ 26,519 14.6%
Aggregate	$ 41,587 37.2%	$ 32,291 27.2%	$ 182,562 100.3%	$ 196,097 101.4%	$ 224,149 76.3%	$ 228,388 73.2%

Numbers may not add due to rounding

Dollar amounts in thousands

Appendix – 3.25% Wage Inflation Preliminary Detail

Contribution Rates and Amounts (Throughout the Year)

	Fire		Police		Total	
	FYE 2026	FYE 2027	FYE 2026	FYE 2027	FYE 2026	FYE 2027
Member Rates						
Tier 1	12.0%	12.0%	10.4%	11.6%	11.2%	11.8%
Tier 2	15.0%	14.8%	13.6%	14.9%	14.0%	14.8%
Aggregate	13.3%	13.3%	12.4%	13.7%	12.7%	13.6%
City Contributions						
Tier 1 Admin/UAL	$ 13,703	$ 3,757	$ 147,652	$ 156,857	$ 161,355	$ 160,614
Tier 1 Normal Cost	$ 20,779	$ 21,038	$ 19,408	$ 20,955	$ 40,187	$ 41,993
	32.2%	32.4%	28.7%	31.9%	30.4%	32.1%
Tier 2 Contribution	$ 7,104	$ 7,932	$ 15,503	$ 18,985	$ 22,607	$ 26,917
	15.0%	14.8%	13.6%	14.9%	14.0%	14.8%
Aggregate	$ 41,587	$ 32,727	$ 182,562	$ 196,797	$ 224,149	$ 229,524
	37.2%	27.6%	100.3%	101.7%	76.3%	73.5%

Numbers may not add due to rounding

Dollar amounts in thousands